

FBS27 – Preparation of FTA® Bloodstain Card from Liquid Blood

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1. Scope

- 1.1. This procedure is used to prepare FTA® bloodstain cards from liquid blood.

2. Background

- 2.1. FTA® cards are impregnated with a patented Whatman technology that lyses cell membranes and denatures proteins on contact. Nucleic acids are physically entrapped, immobilized and stabilized for storage at room temperature. FTA® cards protect nucleic acids from nucleases, oxidation, UV damage and microbial and fungal attack.

3. Safety

- 3.1. Wear personal protective equipment (e.g., lab coat, gloves, mask, eye protection), when carrying out standard operating procedures (SOPs).
- 3.2. Read Safety Data Sheets (SDSs) to determine the safety hazards for chemicals and reagents used in the SOPs.
- 3.3. Handle biological fluid with gloves. Preparation of biological fluids must be performed in the biological safety cabinet.

4. Materials Required

- 4.1. Whatman FTA® bloodstain card
- 4.2. KimWipe™ or Tube decapping device
- 4.3. Permanent marker
- 4.4. Envelope or Pouch

5. Standards and Controls

- 5.1. Not applicable

6. Procedures

- 6.1. Record the following information in the applicable JusticeTrax Laboratory Information Management System (LIMS) documentation:
 - 6.1.1. Liquid blood item number
 - 6.1.2. FTA® card lot number
 - 6.1.3. Source individual section:
 - 6.1.3.1. Name
 - 6.1.3.2. Indicate source: victim, suspect, or other
 - 6.1.4. Sample information section:
 - 6.1.4.1. Type and quantity of vial(s): purple, red, yellow, other
 - 6.1.4.2. Indicate that the initial and final blood levels are marked on the blood vial.
 - 6.1.4.3. Indicate whether the liquid blood requires homogenization.
Note: Homogenization may be needed if the liquid blood does not appear uniform throughout (Refer to step 6.3.1).
 - 6.1.5. Mark the initial blood level on the blood vial using a permanent marker.
- 6.2. Generate a JusticeTrax LIMS label for the bloodstain card. Ensure that the following information is captured on the bloodstain card prior to preparation:
 - 6.2.1. Case number (on affixed label or handwritten)
 - 6.2.2. Initials of preparer

6.2.3. Date bloodstain card prepared

6.2.4. JusticeTrax LIMS bloodstain card barcode

6.3. Visually inspect the blood vial and if needed, conduct the following to homogenize the liquid blood:

6.3.1. Place a KimWipe™ around the area where the vial stopper and the vial meet and gently invert the blood vial until the blood appears uniform throughout.

6.4. Using a new KimWipe™ wipe or a tube decapping device, gently remove the vial stopper from the blood tube.

6.5. Transfer the liquid blood to the bloodstain card by pipetting approximately 200 µl onto each circle of the FTA® card.

6.6. Re-cap the blood vial and discard the pipette tip into the biohazards container.

6.7. Mark the final blood level on the blood vial using a permanent marker and repackage item in its original packaging.

6.8. Allow bloodstain card to air dry completely, take appropriate cutting(s) for DNA analysis, and place in an envelope or pouch labeled with case number, initials of preparer, date, and JusticeTrax LIMS barcode.

6.9. Properly seal the bloodstain envelope or pouch and package inside original blood tube evidence packaging.

7. Sampling

7.1. Not applicable

8. Calculations

8.1. Not applicable

9. Uncertainty of Measurement

9.1. Not applicable

10. Limitations

10.1. Not applicable

11. Documentation

11.1. Applicable JusticeTrax LIMS documentation

12. References

12.1. Forensic Biology Unit Quality Assurance Manual